



Department of
Primary Industries and
Regional Development

Protect
Grow
Innovate

Primary Industries Plan 2023 Update



Western Australia's strategic context

Western Australia's primary industries continue to operate across diverse environments and climatic regions, allowing for agrifood, fisheries and aquaculture production which contribute significantly to the state economy and underpin many regional communities.

WA is a preferred supplier to diverse and rapidly growing local, domestic, and international food and fibre markets.

The state's economy has long been supported by businesses that grow, process, distribute and market food products such as grain, meat, wool, vegetables, fruit, wine, timber and seafood. WA has a reputation for safe, high-quality goods with 60% of our agricultural production in 2022-23 exported to overseas markets accounting for 20% of Australian agricultural exports.¹

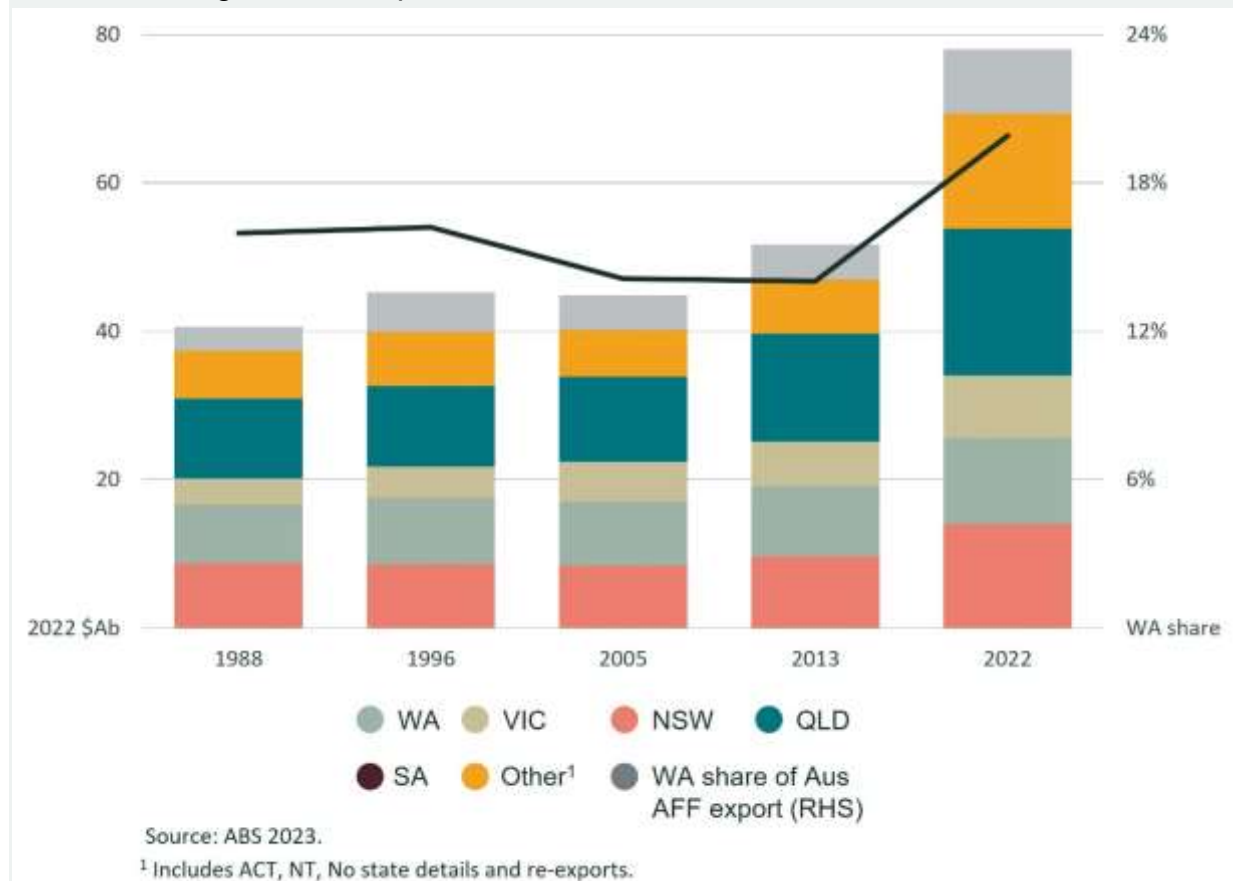


Figure 1 Australian agricultural, fisheries and forestry exports

¹ [Western Australia's Primary Industries: 2021-22 Economic Overview](#)

WA's food and beverage industry is highly innovative and adopts technology to increase productivity, improve quality, extend product shelf life, create efficiencies across supply chains and enhance product traceability.

With strong research and development (R&D), and a commitment to biosecurity, WA is well placed to meet the growing global demand for premium products that are sustainably and ethically produced.

- WA's Primary Industries are dominated by the grains industry in both volume and value. The cereals industry in WA accounted for 47% of the value of primary production and 49% of the value of WA's agricultural exports in 2021-22. WA also consistently produces 30-40% of Australia's total cereal production².
- WA is a significant producer and exporter of high-quality meat, dairy, wool, viticulture, horticulture and honey products.
- There is also high overseas demand for live animals (cattle and sheep) from WA driven mainly from South-East Asia and the Middle East.
- While Western Rock Lobster exports dominate the fisheries sector, the state also produces crab, prawns (shrimps) and marron (native freshwater crayfish), abalone, scallops, finfish and pearl oysters.
- The WA forestry industry comprises hardwood and softwood (pine) plantations, native timbers and sandalwood. Our timber industry is sustainably managed and produces high-quality products for both domestic and export markets.

Increasing consumer expectations of products, production systems and nutritional values

Global and Australian demand and expectations for environmental, sustainable and safe WA premium products continues to increase.

This demand is backed by WA's strong biosecurity systems, sophisticated supply chains and enviable reputation as a reliable supplier of high quality and high value products that meet customer expectations.

WA has some of the finest and most sought after ecologically sustainable seafood in the world, due to high-quality and unspoiled waters, which secures our international reputation as a supplier of premium seafood.

The State's commercial aquaculture industry retains Marine Stewardship Council Sustainability Certification to provide high-value products, such as western rock lobster, pearl oysters, prawns, scallops, abalone, and finfish. These were collectively worth \$254 million in exports in 2021-22³.

Most of WA's premium seafood production is exported, however exports of crustaceans have been limited by the effective closure of the China market and reduced disposable incomes globally⁴.

WA remains competitive with a well-managed and protected environment that uses high-quality, traceable systems and certification to ensure that WA maintains its advantage as a reliable producer of clean, safe and premium food.

WA primary producers face a changing operating environment

WA primary industries are facing both challenges and opportunities from changing climates, new production technologies, consumer attitudes, advances in the digital-economy and continued globalisation of supply chains.

² Western Australia's Primary Industries: 2021-22 Economic Overview | Department of Primary Industries and Regional Development

³ Western Australia's Primary Industries: 2021-22 Economic Overview | Department of Primary Industries and Regional Development

⁴ Snapshot - Western Australia agricultural exports 2022

Regional communities need to balance competition for high-value agricultural land for urban development, conservation, renewable energy production, carbon offsets and critical infrastructure, while protecting land for food production.

Improving producer's resilience to climate changes including reduced rainfall, projected increases in temperatures and wind erosion events will be critical to maintaining primary production levels, agribusiness profitability and export markets.

Product and market concentration of WA primary industries is significant

As Australia's largest grain producing state, WA exports wheat, barley, oats, canola, lupins and pulses to over 30 countries⁵.

WA is mostly self-sufficient in fresh produce due to its ability to grow in 'off' seasons compared to the rest of Australia which delivers greater export opportunities, including niche markets. However, it is vulnerable in longer shelf-life processed products and foods which are reliant on stable transportation channels when delivering between states.

WA's supply of processed goods relies on a limited number of entry points. Interstate imports utilise the national rail and road network with international imports received via sea or air. Over the last three years, WA has experienced several major disruptions caused by extreme weather events, transport interruptions and the global pandemic to supply chains in air, sea, road, and rail freight systems.

Ongoing investment in primary industries can deliver a broad range of local benefits including indigenous development, regional employment opportunities and economic capacity. Improving productivity of WA's agricultural sector will increase food security which aligns with DPIRD's strategic intent and state priorities.

The WA government will continue to invest in WA specific science, R&D, technology and innovation to support WA's primary industries to increase their knowledge base and adapt to new and ongoing challenges. This will accelerate new products and services to attract global investment and support regional communities with addressing long-term strategic challenges.

Primary production will continue to advance with new technologies and systems adapting to challenges of climate change

WA's unique, varied soils and climate zones have resulted in the evolution of a broad and diverse WA agricultural sector, although the price, quality and seasonality of WA and Australia's primary production is increasingly being affected by international disruptions, i.e. wars, pandemic, input shortages etc.

Projected climate risks include more frequent droughts, more intense heavy rainfall events, livestock heat stress, reduced quality and productivity of pasture, greater risks of soil loss and degradation, and changed distributions of pests and weeds⁶.

WA's supply chain is highly exposed to disruption from increasing extreme weather events across Australia, with primary producers already facing challenges to adapt with more frequent and intense changing weather patterns, i.e. rail and road washouts etc.

Climate projections indicate that WA's south west will see more severe droughts in the future with rainfall in this region projected to decrease by up to 15% by 2030⁷.

⁵ [Primary Industries | Invest and Trade](#)

⁶ [Feeding a Hungry Nation: Climate change, food and farming in Australia | Climate Council](#)

⁷ [Climate Change & WA | Water Corporation](#)

The WA government is actively working on climate adaptation activities including the Future Sheep program⁸ to improve production systems and continues to invest in R&D.

Continued growth and development of existing primary industries, diversification of land and identifying and overcoming the factors that constrain adoption of new technology and practices will be critical to achieving improved yields, water use efficiencies, natural resource management and animal welfare. As a result of innovative and modern best practice models of service delivery WA primary industries will be in a commanding position going forward.

The WA Climate Adaptation Strategy⁹ builds on the Western Australian Climate Policy¹⁰ and sets out a comprehensive approach to building statewide climate resilience.

WA food manufacturing costs remain a challenge

WA's food and beverage industry includes around 1200 businesses employing around 19,500 people, with more than two-thirds of these businesses clustered in the Perth metropolitan area and WA's south west. Food represents by value around 14% of the state's manufacturing industry¹¹.

Food products such as continental meats, dairy products and plant milks manufactured in the eastern states are transported to WA via the trans-continental rail line, but the increasing unpredictable weather conditions have seen rail access restricted several times over the past three years.

The major east to west rail line carries freight and passengers between WA and other states and an extensive rail network services agriculture, primarily grain, in the state's south-west.

The Perth airport has regular services capable of freighting premium agrifood, fisheries and high-value forestry products (such as essential oils) to major destinations, including China, Hong Kong, Indonesia, Malaysia, Singapore and the Middle East linking WA to global destinations.

International containerised shipping can be accessed the state's main port in Fremantle, and the nine (9) regional ports are linked to major agrifood and forestry producing areas.

The newly opened Sustainable, Innovative Food Technologies (SIFT) Centre¹² features food and beverage manufacturing equipment including a high-pressure processing unit used to cold pasteurise foods - one of only two in the State. The unit will help extend the shelf life of products while preserving natural nutrition and flavour.

Ownership and management of WA's primary industries will continue to evolve and advance with new technologies and market access opportunities

The success of WA's primary industries over the life of the Primary Industries Plan 2020-24¹³ is a result of the sector's ability to innovate, adapt and continuously respond to economic, social and technological advancements.

WA food processors have historically relied solely on the domestic market and while this market has increased, it remains small - so processors rarely achieve economies of scale.

⁸ Future Sheep - Climate Adaptation to Ensure a Sustainable WA Sheep Industry | Department of Primary Industries and Regional Development

⁹ Climate Adaptation Strategy | Department of Water and Environmental Regulation

¹⁰ Western Australian Climate Policy | Department of Water and Environmental Regulation

¹¹ Food and Beverage Industry in Western Australia | Department of Primary Industries and Regional Development

¹² Multi-million-dollar Food Manufacturing Centre Open for Business | Western Australian Government

¹³ Primary-Industries-Plan-2020-24.pdf (www.wa.gov.au)

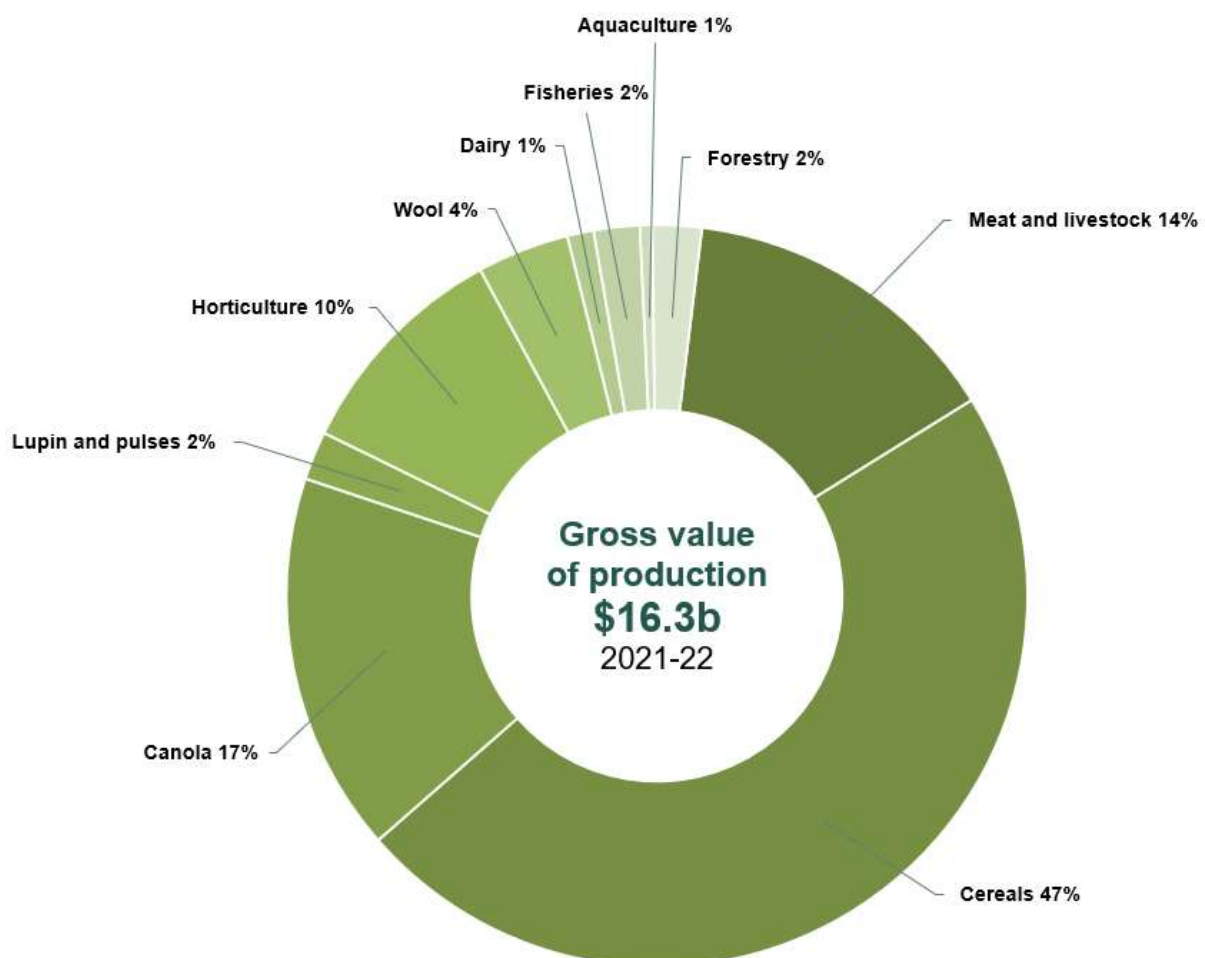
WA food and beverage companies showcased high quality produce on a global stage at major food trade events including, Food and Hotel Asia (Singapore), FOODEX Japan, Gulfood Qatar and ThaiFex Anuga, to increase targeted in-market development opportunities.

Primary industries help make WA's food supply chain strong, adaptable and innovative, while ensuring there is sufficient access to diverse food.

WA exported a record \$12.2 billion of Agricultural, Fisheries and Forestry (AFF) products in 2021/22. This was predominantly driven by cereal exports (\$6.0 billion). WA accounted for more than 18% of Australia's total AFF exports in 2021/22¹⁴.

WA's gross value of primary industries production

WA's primary industries and, to a larger extent, Australian agriculture have enjoyed higher than-average farm revenues (GVP) in 2021-22, and in some regions at least two years preceding it. This was due to record commodity prices and high levels of production brought on by favourable seasonal conditions – growing season rainfall. This has led to record levels of commodity production in many rural locations across the nation. This unusual combination of high prices and good yields improved the financial welfare of a significant number of farmers in WA in 2021-22.



Percentage value of 2021-22 data found in below table (page 7)

¹⁴ [Western Australia's Primary Industries: 2021-22 Economic Overview](#)

Key facts and figures



Exports and production		2019-20	2020-21	2021-22	
Export to major partners	China	\$2,608m	\$1,525m	\$2,094m	↑
	Japan	\$853m	\$765m	\$1,383m	↑
	Philippines	\$402m	\$290m	\$868m	↑
	Germany	\$232m	\$393m	\$863m	↑
	Indonesia	\$376m	\$643m	\$803m	↑
	Other	\$3,865m	\$4,629m	\$6,212m	↑
	Cereals	\$4,148m	\$4,351m	\$6,026m	↑
Export by product type	Canola	\$778m	\$919m	\$3,003m	↑
	Livestock (inc. Meat, Wool & Dairy)	\$2,137m	\$1,901m	\$2,268	↑
	Horticulture	\$259m	\$218m	\$239m	↑
	Fisheries	\$382m	\$323m	\$254m	↓
	Forestry	\$348m	\$239m	N/A	↓
Export by value-add	Raw	\$5,979m	\$6,211m	\$10,266m	↑
	Processed	\$1,858m	\$1,626m	\$1,761m	↑
TOTAL EXPORTS		\$8,339m	\$8,245m	\$12,222	↑
Gross value of production (GVP)	Cereals including Hay	\$3,861m	\$4,859m	\$7,714m	↑
	Other Broadacre Crops	\$963m	\$1,380m	\$3,041	↑
	Livestock (inc. Meat, Wool & Dairy)	\$2,964m	\$2,859m	\$3,156	↑
	Horticulture	\$1,494	\$1,521m	\$1,603	↑
	Total Agriculture	\$9,282m	\$10,620m	\$15,514m	↑
	Fisheries & Aquaculture	\$473m	\$424m	\$414m	↓
	Forestry	\$367m	\$314m	\$348m	↑
TOTAL GVP		\$10,123m	\$11,358m	\$16,277m	↑
Primary Industries Imports	Processed	\$884m	\$935m	\$923m	↓
	Raw goods (Fruit & Veg)	\$82m	\$82m	\$73m	↓
TOTAL IMPORTS		\$966m	\$1,016m	\$996m	↓
Employment	Agriculture	28,500	29,100	26,100	↓
	Fisheries & Aquaculture	1,300	1,500	2,000	↑
	Forestry	800	700	600	↓
	Support Services	2,900	4,200	4,500	↑
	Agriculture, Fisheries & Forestry Total	33,500	35,500	33,200	↓
	Food & Beverage	20,500	19,600	18,600	↓
	Manufacturing				
TOTAL EMPLOYMENT		54,000	55,100	51,800	↓

Based on ABS 6291.0.55.001 - EQ06 - Employed persons by Industry group of main job (ANZSIC), Sex, State and Territory, November 1984 onwards. Released at 11.30 am (Canberra time) 21 September 2023.

Values published differ slightly from previous updates due to DPIRD reviewing some agrifood export codes for accuracy and consistency as well as updated ABS data and DPIRD calculations. These figures align with the WA Primary Industries Economic Overview.

Commitments and actions

The following pages show some of the dedication and collaborative efforts of DPIRD since the previous update. These align with the commitments outlined in the Primary Industries Plan 2020-24.

1. Protect and enhance the condition of our natural resources	
Strategic initiative	Achievement
1.1 Sustainable management of fish and aquatic resources 	Upgraded DPIRD's Hillary shellfish hatchery ¹⁵ expanding the research capability of scallop production.
	Collaborated with a range of stakeholders to contain the spread of the highly invasive marine pest, carpet sea squirt ¹⁶ following a detection at Garden Island and a marine facility in Henderson.
	Rolled out a \$10 million recovery package to help fishers transition to new measures in recovering demersal fish stock. ¹⁷
	Carried out 4,174 land and sea patrols, leading to 81,890 fisher contacts and inspections. Attended 304 locations and carried out 1,341 animal welfare inspections. Issued 1,442 warnings and 1,292 infringements and achieved 273 court prosecutions across animal welfare, fishing, and biosecurity.
1.2 Sustainable management of land and soil resources (land condition and soil health) 	Delivered a \$5.4 million research project to increase profit from nitrogen, phosphorus and potassium fertiliser inputs run in co-operation with Murdoch University and Soils West. ¹⁸
	Funded 6 innovative projects to rejuvenate the rangelands and improve livestock profitability as part of the inaugural \$2 million Southern Rangelands Revitalisation Drought Resilience Grants program. ¹⁹
	Worked with the Gillamii Centre in the Great Southern to release the Saltland Genie ²⁰ app which features eight support tools to help landholders implement solutions on their salt affected land.
	Collaborated with CSIRO to release the 'Mapping salt-affected land in the South West of WA using satellite remote sensing' ²¹ report, to support new approaches in conserving natural assets and agricultural productivity.
	Developed and released the first set of pastoral land condition standards ²² for the rangelands that help assess and improve our states natural resources.

¹⁵ [Hillarys aquaculture upgrades ready for shellfish research](#)

¹⁶ [Underwater survey to detect marine pest | Agriculture and Food](#)

¹⁷ [West Coast demersal scalefish recovery – WA.gov.au \(www.wa.gov.au\)](#)


¹⁸ [Increasing profit from N, P and K fertiliser inputs into the evolving cropping sequences in the Western Region | Agriculture and Food](#)

¹⁹ [Joint media release: Drought resilience grants to revitalise Southern Rangelands | Ministers \(agriculture.gov.au\)](#)

²⁰ [Saltland Genie](#)

²¹ [Salinity under-reported across South West agricultural region – CSIRO Alumni](#)

²² [Pastoral land condition standards – Western Australia | Agriculture and Food](#)

	Awarded \$7 million in State Natural Resource Management Community Stewardship grants to support 57 community driven projects ²³ .
1.3 Systems based agriculture, fisheries, aquaculture, and forestry	Upgraded scientific facilities at the Frank Wise Institute of Tropical Agriculture to support research across horticulture cropping systems, cotton, grain, and fodder production in Kununurra ²⁴ .
	Collaborated with the Water Corporation to build three desalination units to test desal technology and brine disposal for on-farm application as part of the \$1.5 million WaterSmart Farms ²⁵ project to improve climate resilience of WA farms.
	Hosted a soils course for 30 fruit growers at Manjimup as part of the National Landcare Program funded soil extension project.
	Held field days on an apple orchard in Manjimup and a tomato farm in Carnarvon to demonstrate practical use of soil moisture monitoring to better schedule irrigation.
	Held the WA Horticulture Update ²⁶ on 31 October to 1 November 2023. The biggest to date with 260 attendees, first time trade exhibition including 48 displays focused on implementation of practical technology that improves horticultural practices.
	Published a revised edition of the framework for Sustainable Pastoral Land Management ²⁷ .
	Released greenhouse gas calculation resources to allow grain growers to understand their farm emissions and develop low emissions production systems ²⁸ .
	Completed round 2 of the WA Carbon Farming and Land Restoration Program ²⁹ offering financial assistance to 10 projects totalling over \$2.15 million.
	Published the Emissions Baseline Report ³⁰ for the agricultural sector in WA.
1.4 Climate change strategy	Became a partner in the Zero Net Emissions for Agriculture Cooperative Research Centre ³¹ .
	Consulted with WA farmers and industry to co-design and deliver the \$15 million Agriculture Climate Resilience Fund ³² .

²³ [2023 Community Stewardship Natural Resource Management Grants now open](https://www.wa.gov.au/government/news/2023-Community-Stewardship-Natural-Resource-Management-Grants-now-open) | Western Australian Government (www.wa.gov.au)

²⁴ [Major upgrade to help grow WA's tropical agriculture industries](https://www.wa.gov.au/government/news/major-upgrade-to-help-grow-wa-s-tropical-agriculture-industries) | Western Australian Government (www.wa.gov.au)

²⁵ [WaterSmart Farms – Water Security and Resilience in a Drying Climate](https://www.wa.gov.au/government/news/water-smart-farms-water-security-and-resilience-in-a-drying-climate) | Agriculture and Food

²⁶ [Western Australian Horticulture Update 2023](https://www.wa.gov.au/government/news/western-australian-horticulture-update-2023) | Agriculture and Food

²⁷ [Pastoral land condition standards – Western Australia](https://www.wa.gov.au/government/news/pastoral-land-condition-standards) | Agriculture and Food

²⁸ [Carbon Neutral Grain Pilot Report 0.pdf](https://www.wa.gov.au/government/news/carbon-neutral-grain-pilot-report) (agric.wa.gov.au)

²⁹ [The WA Carbon Farming and Land Restoration Program](https://www.wa.gov.au/government/news/the-wa-carbon-farming-and-land-restoration-program) (agric.wa.gov.au)



³⁰ [Emissions Baseline Report for the Agriculture Sector in Western Australia](https://www.wa.gov.au/government/news/emissions-baseline-report-for-the-agriculture-sector-in-western-australia)

³¹ [Home - Zero Net Emissions Agriculture CRC](https://www.wa.gov.au/government/news/home-zero-net-emissions-agriculture-crc) (zneagcrc.com.au)

³² [Western Australian Agriculture Climate Resilience Fund](https://www.wa.gov.au/government/news/western-australian-agriculture-climate-resilience-fund) | Agriculture and Food

	<p>Lead two Future Drought Fund³³ (FDF) programs; <i>Farm Business Resilience</i> and <i>Regional Drought Business Resilience</i>.</p> <p>Became members of two FDF Drought Resilience Adoption and Innovation Hubs; <i>South West WA</i> and <i>Northern WA / Northern Territory</i>.</p>
1.5 Environmental biosecurity	Continued surveillance to support Area Freedom Declarations for browsing ant and red imported fire ant in the Perth metropolitan area, including the use of a specialist odour detection dog at five sites. <i>See page 12.</i>

2. Build trust in Western Australia's primary production

Strategic initiative	Achievement
2.1 WA biosecurity	Diagnostic and Laboratory Services conducted 247,831 tests, comprising 99,647 animal, 44,013 plant pathology tests and 104,171 insect identifications, to ensure early diagnosis of exotic or notifiable pests and diseases.
	The Pest and Disease Information Service (PaDIS) ³⁴ received and screened more than 9,000 enquiries from industry and the public for biosecurity concerns. It resulted in more than 100 detections of animal and plant pests of biosecurity and quarantine concern.
	Completed 283 km of Murchison vermin cell fence to protect 53 pastoral properties from wild dogs, improving livestock productivity and profitability.
	Eradicated Queensland Fruit Fly (Qfly) ³⁵ after a detection was found during routine monitoring in the Bayswater area of February 2023.
	Continued success in the prevention of the invasive declared pest European Wasp establishing in WA, with extensive surveillance, trapping and treatment regimens being undertaken. DPIRD continue to deploy "Adopt-a-trap" ³⁶ , with 2800+ deployed across metro and regional locations.
	Led a range of localised responses, including to potato spindle tuber viroid and potato virus strain Y ^(NTN) (NTN) found in potato growing regions of WA, grapevine red blotch virus at Manjimup, and myrtle rust in the East Kimberley.
	Continued a surveillance and trapping campaign for the pest Polyphagous Shot-hole Borer Beetle ³⁷ to help protect native vegetation and tree and nut industries.

³³ [Future Drought Fund | Agriculture and Food](#)

³⁴ [Pest and Disease Information Service \(PaDIS\) | Agriculture and Food](#)

³⁵ [Queensland fruit fly \(Qfly\) updates | Agriculture and Food](#)

³⁶ [European wasp: Adopt-a-trap initiative | Agriculture and Food](#)

³⁷ [Polyphagous shot-hole borer | Agriculture and Food](#)

	<p>Employed 22 additional officers to enhance early warning and detection to boost preparedness for an emergency animal disease outbreak in WA.</p>
	<p><i>Specialist odour detection dog helps protect WA by sniffing out second invasive ant species while a part of DPIRD's surveillance program for Red Imported Fire Ant</i></p> <p><i>Cola is 1 of 2 specialist odour detecting dogs from Queensland and part of the Queensland-based National Red Imported Fire Ant Eradication Program. She came over with her handler to assist DPIRD's surveillance program for Red Imported Fire Ant (Solenopsis Invicta) at Fremantle Port and surrounds. The queen was found buried half a metre underground and nearby worker ants were discovered with the help from the dogs, Willow and Cola. No other nests were found; however, the dogs and their handler detected another invasive species, Browsing Ants (Lepisiota frauenfeldi) within the port facility.</i></p> <p><i>Odour detector dog helps snuff out browsing ants</i></p>
	<p>Quarantine officers stopped 55,984kg of quarantine risk material from entering the state, protecting WA's area freedom from many pests and diseases.</p> <p>Established an industry and government preparedness task group, <i>Emergency Animal Disease Preparedness Task Group</i>³⁸ to coordinate WA's preparedness for the emerging threats of foot-and-mouth disease and lumpy skin disease.</p> <p>DPIRD supported the rollout of the \$3.4 million package to assist the livestock industry transition to a mandatory electronic identification system for sheep and goats³⁹.</p> <p>The Cattle Industry Funding Scheme⁴⁰ opened for small grants of up \$50,000 per year and large grants of up to \$150,000 per year for up to three years to support biosecurity-related research and innovation projects that will benefit the WA cattle industry.</p> <p>Awarded \$320,000 in grants to protect the state's valuable livestock industry from the impact of wild dogs as part of the WA Wild Dog Action Plan⁴¹.</p>
<p>2.2 Animal welfare</p>	<p>Provided \$549,901 under the Animal Welfare Grant Program⁴² (round 2) to 24 community-based projects which will lead to better care for companion animals and rescued wildlife.</p> <p>In March 2023, the State Parliament passed the <i>Animal Welfare and Trespass Legislation Amendment Act 2023</i> (Amending Act)⁴³.</p>

³⁸ [Task group to focus on preparedness for emergency animal diseases | Agriculture and Food](#)

³⁹ [Electronic identification for sheep and goats | Agriculture and Food](#)

⁴⁰ [Cattle Industry Funding Scheme | Agriculture and Food](#)

⁴¹ [WA Wild Dog Action Plan: Research and Development Fund 2023 to 2025 | Agriculture and Food](#)

⁴² [Animal Welfare Grant Program | Agriculture and Food](#)

⁴³ [Animal Welfare Act amendments 2023 | Agriculture and Food](#)

	Wildlife Animal Ethics Committee, ⁴⁴ formed in 2022, has now assessed over 200 applications.
2.3 Industry standards	Developed new standards for solid waste disposal and spreading in agriculture ^{45 46} .
2.4 Industry-led certification	Completed the review of the National Feedlot Accreditation Scheme, the independently audited accreditation scheme for the feedlot industry.
	Supported West Coast Rock Lobster Fishery to be the first fishery in the world to be Marine Stewardship Council (MSC) certified and re-certified to the MSC standard for a fifth time ⁴⁷ .
	DPIRD science and management activities assisted 12 of WA's commercial fisheries achieve and retain Marine Stewardship Council sustainability certification.

3. Maintain and build competitiveness

Strategic initiative	Achievement
3.1 Applied research to maintain and increase productivity	Undertook targeted research and development (R&D) that supported a second consecutive record grains crop, which surpassed 26 million tonnes.
	Neo barley ⁴⁸ variety was released by InterGrain which was a product of DPIRD's and InterGrain's Cereal Doubled Haploid Program.
	InterGrain, owned by the WA government (58%) and Grains Research and Development Corporation (GRDC) (42%), released four wheat varieties (Thumper, Dozer, Genie, Firefly) and three barley varieties (Neo, Combat, Zena).
	A new wheat (Mowhawk) variety was released by LongReach, developed using DPIRD's Doubled Haploid service.
	Commenced a joint DPIRD and GRDC \$22 million Soil Reengineering Project ⁴⁹ with the aim to remove multiple soil constraints which aims to lift water and nutrient use efficiency by 10% in WA grain production and support the state's growers to achieve crop yield gains.
	Launched the WA Agricultural Research Collaboration ⁵⁰ between DPIRD, CSIRO, the Grower Group Alliance and the state's four major universities. Inaugural director, Dr Kelly Pearce was appointed in August 2023.

⁴⁴ [Wildlife Animal Ethics Committee \(WAEC\) | Agriculture and Food](#)

⁴⁵ [Agribusiness Development Guidelines \(agric.wa.gov.au\)](#)



⁴⁶ [Agribusiness Development Guidelines \(agric.wa.gov.au\)](#)

⁴⁷ [Third-party sustainability certification \(fish.wa.gov.au\)](#)

⁴⁸ [Neo barley variety 'the one' to elevate Australia grains production | Western Australian Government \(www.wa.gov.au\)](#)

⁴⁹ [Grains trials to overcome soil constraints break new research ground | Agriculture and Food](#)


⁵⁰ [Agricultural Research Collaboration \(WAARC\) \(waagresearch.org.au\)](#)

	A five-year Lupin Disease Resistance project focused on boosting lupin resistance to its four major diseases and a four-year Harvestable Annual Legume Options project, are the first to be announced under the WA Research Collaboration's Grains Transformation program.
	Formed a new Pilbara Innovation Partnership ⁵¹ research hub with Meat and Livestock Australia (MLA) and Rio Tinto to drive advances in the northern beef industry that will help unlock industry potential while creating sustaining social benefits.
	Managed the Native Budworm Trapping Program ⁵² and by using results from trials, DPIRD researchers generated a threshold table to give a personalised and more precise measure of potential loss from native budworm damage in wheat crops.
	Molecular markers for genomic structural variation in oats was designed and tested in Australian varieties. This variation is associated with better yield potential. We are working together with InterGrain to validate the results in breeding populations.
	DPIRD researchers developed allele-specific molecular markers for single nucleotide polymorphisms (SNPs) and haplotypes for complex traits which are widely applicable to any breeding program. The resulting varieties would contribute to grower profitability, farm sustainability and global food security.
	New germplasm and candidate genes have been identified for oat Septoria resistance which provide potential for tolerant varieties. The success has resulted in a new investment from GRDC.
	Undertaken research with MLA to establish genetic parameters of new sustainability traits (feed intake and methane production) for sheep production systems, to improve environmental and production outcomes.
	Completed a \$1.5 million feasibility project ⁵³ with MLA to develop a sterile variety of Leucaena for cattle production in Northern Australia. The variety will provide high-value, cost-effective fodder and is non-flowering posing minimal risk if introduced to rangelands environments.
	Produced 44 scientific grains research papers which were communicated to industry in 237 presentations and 79 industry events. Conducted 75 grains research projects to improve industry productivity.

⁵¹ [Pilbara Innovation Partnership research hub to drive northern pastoral potential | Western Australian Government \(www.wa.gov.au\)](https://www.wa.gov.au/government/news/pilbara-innovation-partnership-research-hub-to-drive-northern-pastoral-potential)

⁵² [Management and economic thresholds for native budworm | Agriculture and Food](#)

⁵³ [Sterile leucaena project on track in the north | Agriculture and Food](#)

	Implemented a large field trial program with 277 trials across all grain growing agriculture zones.
	Undertook research with MLA and WA producers to optimise pasture production in a drying climate ensuring the resilience and productivity of our livestock industry.
	Connected grains researchers with 120 key industry consultants to disseminate DPIRD research to create direct on-ground adoption at DPIRD's Annual Grains Industry Day ⁵⁴ , with a focus on crop and soil management post-amelioration.
	Collaborated with WA lupin processors to help them boost the industry and establish the Sweet Lupin Association.
	Formed a multi-disciplinary team to investigate in-field management strategies, alternative treatment options and integrated management tools as part of the states \$8.47 million investment in the Fresh and Secure Trade Alliance program ⁵⁵ on pests to protect and grow the horticulture industry and support market access.
3.2 Growth through Ag-Tech and digital connectivity 	Managed state co-investment with the Commonwealth and industry in regional mobile technology through the \$85 million Regional Telecommunications Project (RTP) ⁵⁶ . The RTP will address areas of poor coverage and upgrade existing infrastructure, enhancing the appeal of regional communities and access to new technologies.
	A successful pilot project funded by DPIRD in 2019 has influenced the state to invest in a further four community Wi-Fi and telephone services projects in remote Aboriginal communities to improve digital connectivity consistent with Closing the Gap commitments.
	Awarded a \$1 million contract to Powertec Telecommunications to upgrade mobile coverage at 18 surf beaches from the Kimberley to the Great Southern ⁵⁷ .
	Provided co-funding of \$9.88 million in 2022-23 for regional telecommunications infrastructure across regional WA, with new infrastructure being deployed across 58 locations ⁵⁸ .
	DPIRD is leading Australian-first trials of a device that uses electricity to kill weeds ⁵⁹ . The project in association with AGXTEND, a brand of CNH Industrial, testing the XPower machine, powered by Zasso™, under Australian conditions, also has investment from the GRDC, Wine

⁵⁴ [Grains Industry Day showcases DPIRD research \(www.wa.gov.au\)](https://www.wa.gov.au)



⁵⁵ [Joint media release: Historic \\$130m trade alliance to supercharge Aussie horticulture exports | Ministers \(agriculture.gov.au\)](https://www.wa.gov.au)

⁵⁶ [Digital Connectivity - Regional Telecommunications Project | Agriculture and Food](https://www.wa.gov.au)

⁵⁷ [Grant awarded to expand mobile coverage at regional surf beaches \(fish.wa.gov.au\)](https://www.wa.gov.au)

⁵⁸ [Digital Connectivity - Regional Telecommunications Project | Agriculture and Food](https://www.wa.gov.au)

⁵⁹ [Protecting WA Crops Issue 34, October 2023 | Agriculture and Food](https://www.wa.gov.au)

	Australia and the Cotton RDC with in-kind support from AHA Viticulture and WALGA.
	Upgraded 145 (83%) of weather stations to the 4G network in preparation of Telstra's planned halt of 3G services ⁶⁰ .
3.3 Building business resilience	Represented agribusiness interests for the Kimberley Flood Recovery Assistance Program and WA Shipping and Supply Chain Taskforce.
	Contributed to the broader state COVID-19 Recovery Plan, co-leading the economic domain, which has provided a range of support, including a \$42 million Freight Assistance Package ⁶¹ .
	Added SharkSmart ⁶² and Weather Stations ⁶³ online resources to the ServiceWA app, providing up to date warnings and alerts to improve community safety.
3.4 Primary industries workforce	Signed a Memorandum of Understanding with Central Regional TAFE to establish a dedicated agricultural training site at DPIRD's Carnarvon Research Station to advance vocational training and boost workforce capacity and capability in the region.
	Established the John Cripps horticulture scholarship ⁶⁴ in honour of the renowned breeder of the iconic Cripps Pink variety, known as Pink Lady® apple. The scholarship will fund a student to complete a postgraduate study of a Doctor of Philosophy or Master of Research on a project relevant to the WA horticultural industry.
	Sponsored four teams in the WA Robotics Playoffs (WARP) ⁶⁵ held at Curtin University in collaboration with Murdoch University over 26-27 August 2023. WARP also hosts an innovation challenge where students are presented with three primary industry challenges that require innovative solutions.
3.5 Improved logistics for supply chain competitiveness	Engaged with the Chamber of Commerce and Industry Western Australia to support access to a small load sea freight option for exports ⁶⁶ .
	Represented agribusiness interests on the Freight and Logistics Council of WA that informs the Minister for Transport.

⁶⁰ [DPIRD weather stations upgrade ready for rollout | Agriculture and Food](#)

⁶¹ [Joint media statement - New subsidy to reduce freight costs for flood affected Kimberley businesses | Western Australian Government \(www.wa.gov.au\)](#)


⁶² [SharkSmart - Home](#)

⁶³ [Weather \(agric.wa.gov.au\)](#)

⁶⁴ [John Cripps horticulture scholarships | Agriculture and Food](#)

⁶⁵ [Western Australian Robotics Playoffs 2024 | Agriculture and Food](#)

⁶⁶ [New small load sea freight option launched for WA - WAFIC](#)

4. Differentiate, value-add, and diversify primary industries	
Strategic initiative	Achievement
4.1 Projects of strategic importance 	Assisted with a lease agreement for the Kimberley Cotton Company to establish a \$60 million processing facility (cotton gin) to advance development of a sustainable, profitable cotton industry in the East Kimberley ⁶⁷ .
	Supported negotiations for an agreement between the WA Government and the Gascoyne Water Cooperative (GWC), to secure \$2.48 million in Commonwealth funding, for GWC to further lift horticulture production in the Carnarvon irrigation area as part of the Gascoyne Food Bowl Initiative.
	Provided case management support to 391 businesses to facilitate their plans to establish or expand agribusiness operations in WA.
	Continued to administer the RfR Program, which provided \$985.05 million towards 262 projects in 2022-23 to support economic, business and social development in regional WA.
	DPIRD worked with the nine Regional Development Commissions to deliver Round 5 of the \$50.85 million Regional Economic Development Grants program ⁶⁸ , allocating \$5,523,371 towards 54 locally driven projects to stimulate job creation and economic growth in the regions.
4.2 Expand value-add agribusiness sector 	Provided \$6.3 million in Value-Add Investment Grants ⁶⁹ to ten businesses to drive business growth, diversification, resilience and employment.
	Distributed more than \$330,000 to support 44 Community Resource Centres to implement technology and innovation projects across WA regions ⁷⁰ .
	Awarded \$1 million in Producer Innovation Fast Track ⁷¹ grants to pastoral beef producers to support adoption of new R&D, technologies, and innovation.
4.3 Agri-food Cluster Development Program	Launched the Food Innovation Precinct of WA ⁷² to help transform opportunities into success stories, business growth, diversification, and jobs in the Peel region.
4.4 Diversification of agribusiness opportunities	Developed an integrated water and land project ⁷³ in the Myalup agriculture area to utilise Wellington Dam water for agriculture.

⁶⁷ [The Kimberley Cotton Company's Development of Cotton Gin \(kdc.wa.gov.au\)](https://kdc.wa.gov.au/)

⁶⁸ [Grants and Funding \(www.wa.gov.au\)](https://www.wa.gov.au/)

⁶⁹ [Value Add Investment Grants | Agriculture and Food](#)

⁷⁰ [Over \\$330,000 invested to boost technology in the regions | Western Australian Government \(www.wa.gov.au\)](#)

⁷¹ [Producer Innovation Fast Track Grants | Agriculture and Food](#)

⁷² [Food Innovation Precinct Western Australia | Agriculture and Food](#)

⁷³ [Myalup Wellington Project | Agriculture and Food](#)

	Completed a strategic review of all land and water for horticulture and irrigated agriculture across the state as part of a statewide food production strategic approach.
4.5 WA Aquaculture Development Plan	Collaborated with Department of Biodiversity, Conservation and Attractions to unveil three new management plans to safeguard the Abrolhos Islands' natural habitat, cultural heritage, fishing and recreation, and to support sustainable tourism ⁷⁴ .
	Provided case management support service to 16 Aboriginal pastoral properties, reducing risk and improving business sustainability.
	Leveraged \$710,000 of funds from the Fisheries Research and Development Corporation to develop a Kimberley Aboriginal Mud Crab Fishery ⁷⁵ .
	Delivered the Aboriginal Pastoral Program ⁷⁶ in partnership with Nyamba Buru Yawuru and Kimberley Pilbara Cattlemen's Association. 10 jobs were created in the pastoral industry for Aboriginal people.
	Delivered a \$360,000 Building Better Aboriginal Business Grant ⁷⁷ round to eight Aboriginal businesses to support the entities become preferred native seed suppliers to the land management and carbon farming sector. A key element to the RfR Aboriginal Governance and Leadership Development Program.
	DPIRD's Aboriginal Economic Development (AED) team facilitated an Aboriginal Bushfood program that empowers Aboriginal people in the Agrifood sector ⁷⁸ .
	AED participated in a Native Crops Wattle Trial (288 trees sown in 2020) which investigated production over time in Esperance as a part of the Ancient Grains Trial at DPIRD's Esperance Downs Research Facility.
	The Forest Products Commission (FPC) \$350 million Softwood Plantation Investment Program ⁷⁹ is gathering momentum with 2022-23 seeing the acquisition of new properties for plantation establishment. Plantings on these properties, located in the South West, will help secure the future of the softwood processing sector and support the state's housing and construction industry.
	The FPC registered several new plantations as carbon sequestration projects under the Emissions Reduction Fund. The Softwood Plantation Investment Program is expected to lead to the sequestration of up to 7 million tonnes of carbon dioxide equivalent by 2050.

⁷⁴ [Abrolhos Islands management plans to safeguard slice of paradise | Department of Biodiversity, Conservation and Attractions \(dbca.wa.gov.au\)](#)

⁷⁵ [Developing a Kimberley Aboriginal Mud Crab Fishery | IERDC](#)

⁷⁶ [Kimberley graduates ready to take on pastoral challenge | Agriculture and Food](#)

⁷⁷ [Aboriginal Economic Development - what we deliver | Agriculture and Food](#)

⁷⁸ [Support for Aboriginal bushfoods industry | Agriculture and Food](#)

⁷⁹ [Softwood Plantation Investment Program \(www.wa.gov.au\)](#)

	The FPC continues to support the integration of pine plantings on private land through the Farm Forestry Assist program ⁸⁰ .
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5. Secure and grow markets

Strategic initiative	Achievement
5.1 Industry growth partnerships 	Continued the \$3 million Wine Industry Export Growth Partnership, ⁸¹ seeking to expand sales in existing markets and opening new markets in South East and North East Asia. 24 activities were completed as part of the partnership, including Prowein Dusseldorf and Vineexpo Asia Wine Tradeshows.
	Committed \$10.12 million in the industry-led Processed Oats Partnership (POP) to provide a foundation for growth in the WA oat industry. DPIRD and Grains Industry Association of WA hosted the 2023 POP Showcase ⁸² . The event updated industry stakeholders on the projects being funded by the POP and highlighted how they are facilitating industry growth.
5.2 Targeted in-market development	The Taste WA ⁸³ trade mission promoted WA produce to international markets and buyers in a week-long program inviting visitors from China, Indonesia, Israel, Malaysia, the Philippines, Singapore, United Arab Emirates, Vietnam, Hong Kong and Taiwan to tour WA's agribusinesses.
	WA food and beverage companies showcased their finest produce on a global stage at four major food trade events - Food and Hotel Asia (Singapore), FOODEX Japan, Gulfood Qatar and ThaiFex Anuga.
	Led WA agrifood sector's participation at the European food exhibition Salon International de L'alimentation (SIAL) and a UK trade mission with a buyer matching and market engaging program ⁸⁴ .
	Completed round 2 of grants committed under the International Competitiveness Co-Investment Fund ⁸⁵ to assist agri-food businesses to retain and build Asian market share.

⁸⁰ [Farm Forestry Assist Program \(www.wa.gov.au\)](http://www.wa.gov.au)

⁸¹ [Wine Industry Export Growth Partnership established by WA government - Food & Beverage Industry News \(foodmag.com.au\)](http://www.wa.gov.au)

⁸² [2023 POP Showcase](http://www.wa.gov.au)

⁸³ [Trade mission offers international buyers a taste of WA | Western Australian Government \(www.wa.gov.au\)](http://www.wa.gov.au)

⁸⁴ [WA businesses at world's biggest Food Expo in Paris - Food & Beverage Industry News \(foodmag.com.au\)](http://www.wa.gov.au)

⁸⁵ [International Competitiveness Co-investment Fund | Agriculture and Food](http://www.wa.gov.au)

5.3 Strengthening market access and marketing	<p>WA's first commercial avocado shipment to Thailand occurred in September 2023 following work through international trade missions and exhibitions, alongside research to improve fruit quality as well as strict measures to maintain the state's biosecurity status⁸⁶.</p>
	<p>DPIRD supported WA food and beverage producers to connect directly with on and off-premises buyers from across the country at the “Meet the Buyer” exhibition on 24 October 2023⁸⁷.</p>
	<p>Plating Up WA attracts a growing number of venues featuring WA ingredients during June annually. DPIRD partnered with The Department of Jobs, Tourism, Science and Innovation to deliver Plating Up WA: Singapore Edition⁸⁸ including a Chef Exchange Program.</p>
	<p>DPIRD helped close key apple export deals to support the expansion of WA's horticulture industry into overseas markets including the apple known in Australia as Bravo®, can now be grown and sold under the Soluna® brand.</p>
	<p>DPIRD facilitated a new trade relationship between Bindoon-based Northern Valley Packers and leading Thai importer CP Foods which exported 23 tonnes of naval oranges - the first shipment of WA citrus to Thailand in 20 years.</p>
5.4 Australian Export Grains Innovation Centre	<p>Worked with Australian Export Grains Innovation Centre (AEGIC), GRDC and Grains Australia to create greater alignment between Grains Australia and AEGIC to deliver precompetitive export research and development for grain classification, market access, market information, and education to strengthen relationship with customers of Australian grain.</p>

⁸⁶ [WA's first commercial avocado shipment arrives in Thailand | Western Australian Government \(www.wa.gov.au\)](https://www.wa.gov.au/government/news/wa-s-first-commercial-avocado-shipment-arrives-in-thailand)

⁸⁷ [Meet The Buyer - WA Food & Beverage Trade Show in Perth](https://www.wa.gov.au/government/news/meet-the-buyer-wa-food-beverage-trade-show-perth)

⁸⁸ [Singapore Venues — Plating Up WA](https://www.wa.gov.au/government/news/singapore-venues-plating-up-wa)



DPIRD back photo: Truffle sniffing dog, Latte. Blaker's truffle farm, Manjimup, WA.

Important disclaimer

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